

TRASH RECEPTACLE

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PRIORITY

[0001] Priority. The present invention claims priority from co-pending application number 10/124,511, filed 04/16/02 to the same inventor, and to co-pending provisional application number 60/525,380, filed 11/26/2003 to the same inventor, the disclosures of which are incorporated herein.

DESCRIPTION

BACKGROUND OF THE INVENTION

[0002] Field of the Invention. The present invention generally relates to refuse disposal systems, and more particularly relates to refuse disposal systems for the hygienic disposal of sanitary napkins and the like.

[0003] Background Information. The disposal of tampons, sanitary napkins, and other types of sanitary products in a hygienic manner is a frequent issue in public restrooms for operators and maintainers of said facilities. If sanitary products are disposed of in a sewage or septic system, problems such as sewage pipe blockage can occur, causing backups and overflows of plumbing components.

[0004] As a result, building maintenance operators often provide special waste receptacles for deposition therein said used sanitary products. Numerous special waste receptacles and manners of sanitary disposal have been invented and are currently utilized. For instance, it is known to use a provided small wax paper bag for deposition of the used sanitary products therein, this wax paper bag being folded shut and placed in a standard garbage receptacle. Another example is an enamel metal floor receptacle having a hinged lid. Also known are floor or wall mounted receptacles having hinged doors.

[0005] With such prior art units, in order to operate the unit the user must open a lid that has been touched by others with soiled hands. The potential for transmittal of wet or dried bodily fluids from user to user is very high, thus making the operation of the unit unsanitary. Another issue is the fact that oftentimes discarded waste from previous users can be visible to the next user. This particularly occurs when the previous user(s) may not have been careful to “hide” their discarded waste with the folding of their feminine hygiene product and/or wrapping toilet paper around the feminine hygiene product, thus making the container unsightly. Even with the wrapping of toilet paper around the discarded waste, sanitary napkins in particular are prone to “re-open” themselves and produce an unsightly and unsanitary condition. In addition, the “re-opened” sanitary napkins can be hanging outside of the waste container, thus making the container unsightly and unsanitary to other users.

[0006] The current prior art units are too small in capacity to house frequent use, thus

making them unreliable to hold large amounts of waste in restrooms such as those found in restaurants, shopping malls, etc. If the waste container is not emptied frequently by janitorial staff, the container becomes full. Janitorial staff, particularly when the waste container is unsightly or unclean, can intentionally neglect proper maintenance of this receptacle rather than dealing with the mess. Also, a full container deters future users from using such a means of disposal, thus some users look for other means to dispose of their feminine hygiene products (often times through the plumbing system), which can cause additional problems for the owners of the facility.

[0007] Due to unsanitary conditions of the current means of disposal and the unreliability of the units, users often discard their waste through the plumbing system as noted above. This will often clog plumbing systems, requiring the emergency visit of a plumber to solve the problem. Thus resulting in added expense to the owners of the facility.

[0008] One of the more prevalent current models of waste containers for the discarding of feminine hygiene products is a floor-based model in which the placement of this container is oftentimes out of reach of the user who is positioned on the toilet. The user is apt to discard of her waste through the use of the plumbing system because of this inconvenience. As noted in the above paragraph, this can result in added expense to the owners.

[0009] With the current means of disposing feminine hygiene products, the janitorial staff

is faced with the daunting task of removing the discarded waste products and cleaning the waste container. Dried bodily fluid residue is oftentimes on the outside housing of the container and on the floor surrounding the container as waste products will at times fall onto the floor due to the unreliable nature of the current waste containers.

[0010] What is needed is a method and apparatus for sanitary napkin disposal which provides for sanitary operation of the unit, hides waste from subsequent users, is reliable, is inexpensive, is convenient, and is easily changed out and unnecessary to clean. The present invention solves these needs.

SUMMARY OF THE INVENTION

[0011] The present invention, in its preferred embodiment, is an improved trash receptacle for receiving trash. This trash receptacle configured for using a disposable lid sheet having a lid orifice or hole there-through and a disposable trash container, such as a trash bag. The trash receptacle itself comprises a trash receptacle body and a disposable lid sheet holder.

[0012] The trash receptacle body defining a trash receptacle chamber for containing therein the trash container. The body further defining an opening through which trash can be inserted into the trash container, this opening having a first side adjacent a second side.

[0013] The disposable lid sheet holder configured for suspending the disposable lid sheet over the lid orifice. The disposable lid sheet holder comprises: a first hinge assembly, a second hinge assembly, a first flange, and a second flange. The first hinge assembly attaching to the body at the first side. The first hinge assembly configured for hingedly attaching the first hinge to the body. The second hinge assembly attaching to the body at the second side. The second hinge assembly configured for hingedly attaching the second hinge to the body. The first flange attaching to the first hinge, this first hinge defining there-through a first flange orifice. The second flange attaching to the second hinge, this second hinge defining there-through a second flange orifice. Wherein, in use, the first flange and the second flange cooperate to hold there-between the disposable lid sheet. Wherein a user can discard trash through the first flange orifice, through the lid orifice, through the second flange orifice and into the trash container.

[0014] Still, other objects and advantages of the present invention will become readily apparent to those skilled in this art from the following detailed description wherein I have shown and described only the preferred embodiment of the invention, simply by way of illustration of the best mode contemplated by carrying out my invention. As will be realized, the invention is capable of modification in various obvious respects all without departing from the invention. Accordingly, the drawings and description of the preferred embodiment are to be regarded as illustrative in nature, and not as restrictive.

BRIEF DESCRIPTION OF THE DRAWINGS

- [0019] Fig. 1 is an exploded side view of one embodiment of the present invention.
- [0020] Fig. 2 is an exploded top view of the embodiment of Fig. 1.
- [0021] Fig. 3 is an exploded front view of the embodiment of Fig. 1.
- [0022] Fig. 4 is an assembled front view of the embodiment of Fig. 1.
- [0023] Fig. 5 is an assembled side view of the embodiment of Fig. 1.
- [0024] Fig. 6 is an assembled, perspective view of another embodiment of the present invention.
- [0025] Fig. 7 is a partially exploded view of the embodiment of Fig. 6.
- [0026] Fig. 8 is an exploded, side view of the embodiment of Fig. 6.
- [0027] Fig. 9A is a first side, partially exploded view of the embodiment of Fig. 6.
- [0028] Fig. 9B is a first end, partially exploded view of the embodiment of Fig. 6.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0031] While the invention is susceptible of various modifications and alternative constructions, certain illustrated embodiments thereof have been shown in the drawings and will be described below in detail. It should be understood, however, that there is no intention to limit the invention to the specific form disclosed, but, on the contrary, the invention is to cover all modifications, alternative constructions, and equivalents falling within the spirit and scope of the invention as defined in the claims.

[0032] The present invention is a trash receptacle for retaining therein a collection of trash. The invented receptacle configured to be easily maintained and cleaned, while providing for a sanitary disposal method/apparatus for a user, preferably including aesthetically.

[0033] One embodiment of the present invention is particularly a feminine hygiene disposal unit for sanitary receipt and disposal of used sanitary products. Fig. 1, shows one such embodiment. Referring initially to Fig. 1 the sanitary disposal unit 10 comprises a disposal bag dispenser 20 for dispensing disposal bags, at least one disposal bag 30 for receiving therein used sanitary products, a receptacle 40 for holding a disposable receptacle liner, and a disposable receptacle liner 50 for receiving therein said used disposal bags.

[0034] In the embodiment shown, the disposal bag dispenser 20 and the receptacle 40 are integrally built into or as part of a unitary frame or housing, however other embodiments are also envisioned wherein the disposal bag dispenser 20 will be separate from the receptacle 40. The preferred fabrication of the frame/disposal bag dispenser/receptacle is stainless steel, however other materials may also be used, including but not limited to plastic.

[0035] The disposal bag dispenser 20 is utilized to hold at least one (and preferably a plurality of) disposal bag 30. In the embodiment shown, a pair of flanges 21, 23 define an opening therethrough which allow disposal bags 30 to be placed within the disposal bag dispenser 20 and retrieved through said opening. Other means for dispensing said disposal bags are also envisioned. Alternatively, a spring or other biasing means may be used to bias the disposal bags against the opening, as defined by the flanges 21, 23.

[0036] In use, the user would remove the front most disposal bag and succeeding disposal bag would then be pushed forward to replace the bag taken. It is preferred to configure the disposal bag dispenser so that disposal bags 30 held therein may be removed one at a time without a user touching any disposal bag other than the front most disposal bag.

[0037] Preferably, a door 22 or other access opening is provided within the disposal bag dispenser 20 so that a maintenance worker may open said disposal bag dispenser in order to replenish the disposal bags held therein. The embodiment shown shows a lock or latch 24 for

fixing the disposal bag dispenser door or lid 22 in a closed position thereby enclosing the bag dispenser 20. In the embodiment shown, the bag dispenser is located at the top of the housing, however, other placements and orientations of the bag dispenser are also envisioned.

[0038] Also utilized with the present invention is at least one disposal bag 30 into which a user places the used sanitary product to be disposed of. Such a disposal bag 30 preferably has a closed end and an opened end and consists of enough material so that the used sanitary product can be placed therein and the open end folded so that it is closed. It is preferred that such a disposal bag be made of a fluid resistant material, such as waxed paper, glycine, plastic, or other matter to prevent fluids from leaking out of the disposal bag. In a less preferred embodiment, such a disposal bag could be plastic and be dispensed on a roll. It is preferred that the rear wall of the bag be slightly taller than the front wall of the bag so that a user can stick her finger into the disposal bag and pull on the front wall of the bag to remove the disposal bag from the dispenser. In such a manner, the succeeding disposal bag is left sterile for the next user.

[0039] Referring now to Fig. 2, this embodiment further comprises a receptacle 40. This receptacle 40 for receiving therein a disposable receptacle liner 50. Preferably, the receptacle 40 comprises a lid flap first flange 42 and a lid flap second flange 44. It is preferred that these lid flap flanges be configured for receipt in a sandwiching manner the lid flap 54 of the disposable receptacle liner 50. For example, the lid flap second flange 44 would be pivoted

on its hinge to a generally horizontal position, the liner's lid flap 54 would be laid over on top of the lid flap first flange 44, and then the lid flap first flange 42 would be laid on top of the lid flap 54. By sandwiching the lid flap in such a manner, the lid flap 54 of the disposable receptacle liner 50 is held in a generally horizontal position so that a user could drop a filled disposal bag 30 through the opening 52 of the disposable receptacle liner 50. This sandwiching assembly provides structural stability and support to the disposable receptacle liner 50. The assembly will hold the disposable receptacle liner in an open position as well as provide support for the top lid flap 54 of the liner 50 for when articles are dropped through the "X"-shaped slit.

[0040] Referring now to Fig. 3, it is preferred that the receptacle 40 further comprise at least one door 46, such a door having a latch or lock 48. Such a receptacle thereby defining a receptacle inside chamber able to receive therein the disposable receptacle liner 50.

[0041] The disposable receptacle liner 50 used with this embodiment preferably comprises a generally rectangular box having a top surface with at least one opening 52 therethrough further having a lid flap 54 which is able to be folded over. This lid flap 54 further having an opening 52 defined therethrough. The preferred opening 52 comprises a pair of diagonal slots therethrough, such as those shown in the figures. However, other manners of openings are also envisioned. The benefit of using such an X-shaped opening is that the opening would allow used disposal bags to be dropped therethrough with the opening

generally returning to its original shape. This would also function to block viewing of the contents of said disposable receptacle liner by subsequent users. It is preferred that the disposable receptacle liner be made of wax-coated paper or plastic. In the embodiment shown, the disposable receptacle liner is placed within the receptacle 40 by opening the front door 46 of the receptacle and sliding the bag 50 into place, "sandwiching" the lid flap 54 of the bag 50 (containing the "X"-shaped slit) between two lid flap flanges 42, 44 to allow for structural stability.

[0042] In use, while sitting on the toilet, the user conveniently reaches over to pull an individual disposal bag from the spring-loaded bag dispenser at the top of the unit. The user then places her used feminine hygiene product into the bag and scrunches or folds it closed. She then drops the bag through the "X"-shaped slit in the waste receptacle located at the bottom of the unit.

[0043] Fig. 1 shows the side exploded view of this embodiment of the present invention. Fig. 2 shows a top exploded view of this embodiment of the present invention. Fig. 3 shows a front exploded view of this embodiment of the present invention. Fig. 4 shows a front view of this embodiment of the present invention, as installed together. Fig. 5 shows a side view of this embodiment of the present invention, as installed together.

[0044] Referring now to Figs. 6-9B, shown is an alternative embodiment of the present

invention, namely a trash receptacle 100. Unlike the embodiment discussed in detail above, this embodiment does not utilize a small disposal bag that an individual can put their trash into. Instead, in the embodiment of Figs. 6-9B, trash can be disposed directly through the plastic/paper sheet (lid 154). As such, providing a separate dispenser for the disposal bags and providing the disposal bags themselves becomes unnecessary.

[0045] This lid 154 is preferably disposable, being composed preferably of plastic, paper and/or waxed paper. Other materials are likewise envisioned. Being disposable, when the lid becomes soiled, the individual responsible for the maintenance of the device could either flip the lid over exposing the lower, unsoiled side or could discard the lid into the trash bag 150 and replace it with a new clean one.

[0046] The lid preferably having an X-shaped slit 152 there-through. This X-shaped slit both blocking the view of the contents of the trash receptacle but also protecting the user from accidentally physically touching any of contents of said trash receptacle. The result is that there is no risk of contamination from residue of others' waste products/trash.

[0047] This embodiment additionally includes an interior "bag holder" made of a plastic/metal rod or hoop 160. While a hoop shape is shown, obviously the present invention is not intended to be limited to such a shape or configuration, but the bag holder could be any type of structure configured for holding a bag in place within the lower receptacle 140. In this

embodiment, the bag holder/rod 160 secures a standard paper/plastic bag 150 into place.

[0048] To install, preferably, the bag 150 is inserted through the center of the rod 160, leaving a slight overhang that is wrapped outward around the rod and tucked underneath to allow for the securing of the bag into place. The bag secured into place by resting the hoop/rod 160 (preferably metal or plastic) upon a shelf support 170 within the housing 140. Gravity holds the rod against the shelf support, and as such friction holds the bag suspended from this manner of attachment. Other manners of suspending the bag 150 within the lower receptacle 140 are likewise envisioned.

[0049] In this embodiment (in comparison to the prior main embodiment), the disposable lid 154 is preferably separate from the interior receptacle bag 150. The lid 154 configured to be placed between two hinged frames (142, 144) where it sits securely to allow for a user to dispose of waste product through the disposable lid 154 through the slit 152 and into the lower receptacle 140 containing the bag 150. This unit can be floor-based or wall mounted. It is preferred that the lid be configured for sandwiching between the two hinged frames, however other manners of suspending and supporting the lid are likewise envisioned.

[0050] The preferred housing 140 preferably comprising plastic or metal, with hinged flanges or frames 142, 144 to secure the preferably lid 154. The housing 140 allows for securing of a bag 150 to allow for the receiving of waste products therein.

[0051] Another embodiment of the present invention comprises a sanitary disposal apparatus for disposal of a used sanitary feminine hygiene product. The apparatus comprising: (a) a disposal bag dispenser for dispensing a disposal bag, said disposal bag for receipt of said used sanitary feminine hygiene product; (b) a disposable receptacle liner for lining a receptacle, said receptacle liner further comprising a lid defining an opening within said lid, said liner comprising a generally rectangular bottom wall, four side walls extending from said bottom wall, wherein adjacent side walls connect with one another and said bottom wall to form a open topped rectangular box, a top wall attaching to one of said side walls, wherein said top wall defines an opening there-through; and (c) a receptacle for receiving said disposal bag, wherein said receptacle further comprises a holder for holding said top wall, said holder comprising: (1) a generally rectangular frame having a generally rectangular rim, said rim having a first side opposite a second side, (2) a first frame flange pivotally connected to said first side, said first frame flange; and (3) a second frame flange pivotally connected to said second side, said second frame flange, (4) wherein said holder is able to sandwich said lid flap between said first frame flange and said second frame flange, thereby holding said lid flap. Optionally, said opening may comprise at least one slot within said lid flap. Optionally, said opening comprises an X-shaped slot within said lid flap.

[0052] While there is shown and described the present preferred embodiments of the invention, it is to be distinctly understood that this invention is not limited thereto but may be

variously embodied to practice within the scope of the following claims. From the foregoing description, it will be apparent that various changes may be made without departing from the spirit and scope of the invention as defined by the following claims.